



NEUERO Farm- und Fördertechnik

Installation, Operation and Maintenance Manual

Pre-cleaner
Type: WR 14

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1.0 Contents

Section	Page
1.0 Contents	2
2.0 Certificate of Conformity	3
3.0 Warning sign description	4
4.0 Safety guidelines	5
5.0 Intended purpose	6
6.0 Pre-cleaner design	7
7.0 Technical specifications	8
8.0 Installation	9
8.1 Electric connections	9
8.2 Fan installation	9
8.3 Cleaning rate adjustment	10
9.0 Startup	10
10.0 Maintenance and cleaning	11
10.1 Fan impeller replacement	11
10.2 Distributor impeller replacement	11
10.3 Cleaning	11
11.0 Spare parts	12 - 13

2.0 Certificate of Conformity**EU Certificate of Conformity
under the EU-Machine Directive 98/37/EU, Appendix II A**

This is to certify that the equipment mentioned herein complies, in terms of design and construction, as well as in terms of the manufacturer's specifications, to the currently valid applicable basic safety and health protection requirements of the EU Machine Directive.
The present Certificate shall become null and void in case of any modifications to the equipment made without our approval.

Manufacturer:	NEUERO Farm- und Fördertechnik GmbH Hermann-Unbefunde-Str. 6 - 49324 Melle
Machine description:	Pre-cleaner
Machine type:	WR 14
Maschine-No.:

Applicable EU regulations:

EU Machine Directive (98/37/EU)
EU Low Voltage Directive (93/68/EWG)
EU Directive on Electromagnetic Compatibility (92/31/EWG)



Applicable harmonized standards:	EN 292-1; EN 292-2 EN 294 EN 349 EN 811
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**Applicable national standards and
technical specifications:**

Melle, April 2005

A handwritten signature in black ink, appearing to read 'Heinz Hemmen'.

Heinz Hemmen
(Executive Manager)

A handwritten signature in black ink, appearing to read 'Markus Hemmen'.

Markus Hemmen
(Executive Manager)

3.0 Warning Sign Description for Pre-cleaner, Type WR 14

Before putting the machine in operation, carefully read and observe the safety guidelines!



Shut down the drive motor, pull the power connection plug or secure the main switch in its OFF position with a padlock before any cleaning, maintenance and repair operations!



Do not open or remove safety devices with the drive motor running!

4.0 Safety Guidelines

Please carefully read and observe the following safety guidelines before operating the machine!



This sign is used to indicate all provisions related to safety. All other users of the machine should be made aware of these guidelines.

- Disconnect the main power supply cable or turn off the main switch in the switchboard before any repair or dismantling operations.
- Stop the drive motor and disconnect the power supply prior to any cleaning, maintenance and repair operations. On units with a lockable main switch this is done by way of securing the main switch in its OFF position with a padlock.
- All rotating parts are enclosed in compliance with industrial accident-prevention standards. The enclosures should be mounted at all times, except during repair operations.
- The NEUERO pre-cleaner should only be operated, maintained and set up by authorized persons who have been made aware of the operation hazards.
- Do not open or remove the safety devices with the drive motor running.
- Do not reach inside the running machine!
- The applicable accident prevention guidelines, as well as other general safety and health protection regulation should be observed.
- The machine, in its standard design, shall not be used in explosion-hazardous environments.

5.0 Intended Purpose

The NEUERO Pre-cleaner has been developed for separating dust, chaff and other light impurities from grain crops. Moreover, it is suitable for seed, rice and plastic granulate cleaning. Consult the manufacturer for other materials.

- The use of the unit beyond the specified purposes is to be regarded as misuse. The manufacturer declines the responsibility for any damage caused by misuse; the user shall exclusively assume all risks related thereto.
- The use of the machine for its intended purpose also includes the observance of the operation, maintenance and cleaning guidelines specified by the manufacturer.
- The NEUERO pre-cleaners should only be operated, maintained and set up by authorized persons who have been made aware of the operation hazards.
- The electric connections of our machines and equipment should only be carried out by a duly authorized electrician.
- Check for correct rotation direction of the centrifugal fan before initial startup or when re-connecting the mains power supply.
- The unit, in its standard design, shall not be used in explosion-hazardous environments.
- Unauthorized alterations to the machine design are not allowed.

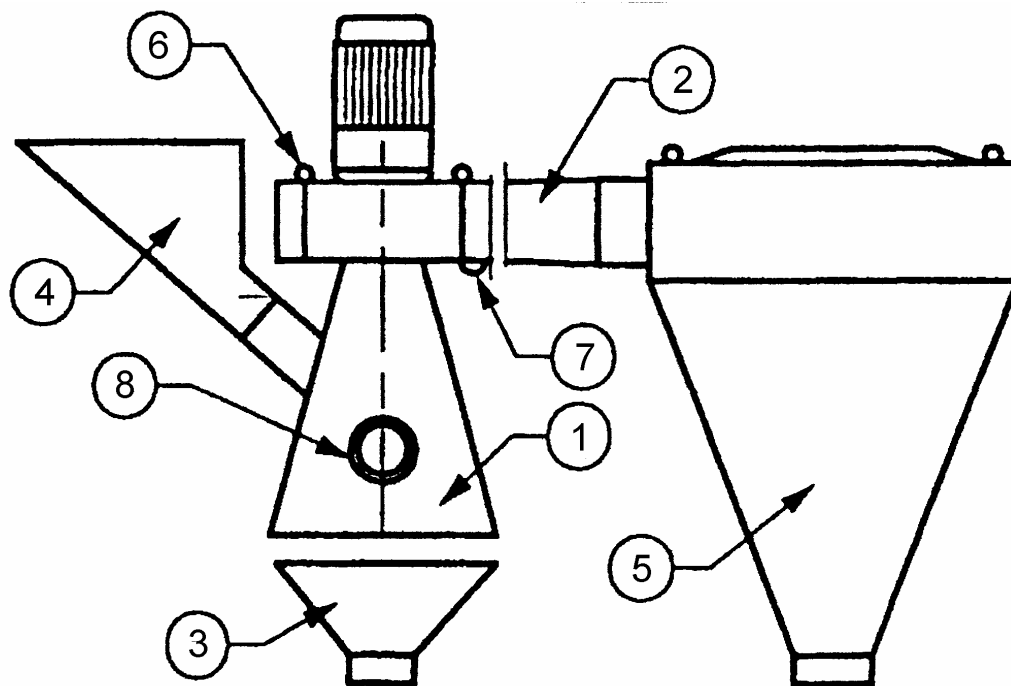
6.0 Pre-cleaner Design

The NEUERO WR 14 pre-cleaner consists of a centrifugal fan which is equipped with a cleaning unit. It can be connected to a cyclone dust separator, from which the waste material can be discharged into sacks. The motor is directly attached to the centrifugal fan with a vertical suction channel.

The grain is routed via a tube into the cleaning unit, where it falls over an impeller mounted on a vertical axle and rotated by the air stream generated by the centrifugal fan.

The impeller scatters the grain which is distributed over the ascending air stream. The lightweight particles from the grain are sucked up through the centrifugal fan and routed into the cyclone or via a pipeline out of the building. A throttle valve mounted directly under the fan is used to adjust the suction flow rate.

Figure 1: Schematic drawing of the Pre-cleaner



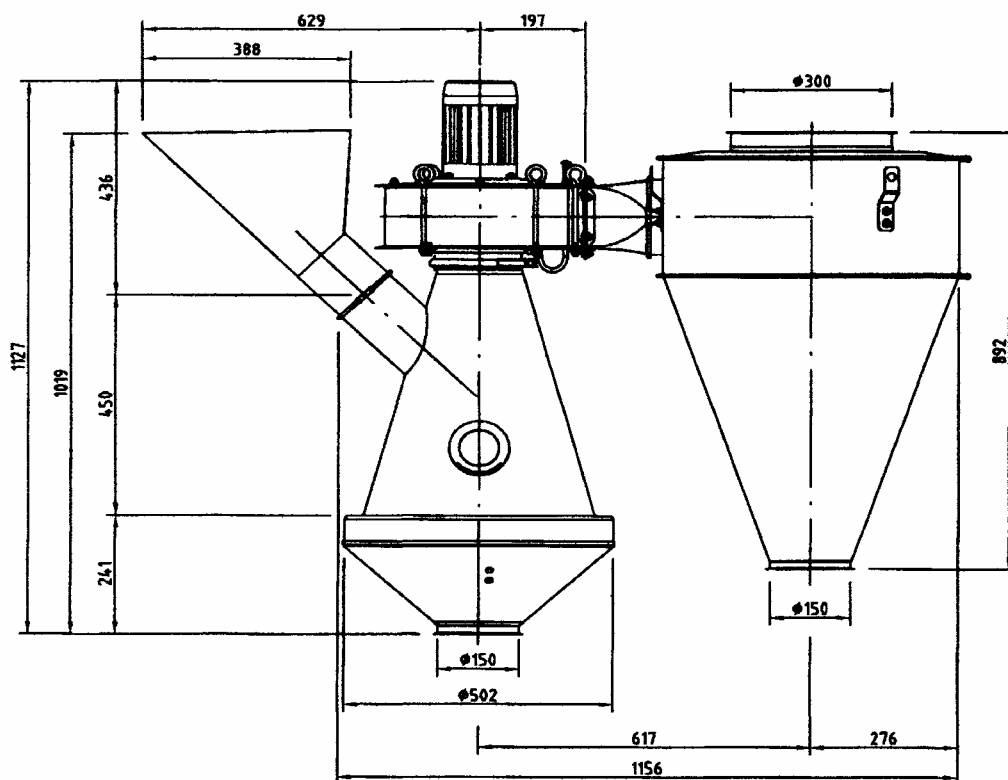
- 1) Pre-cleaner with fan and motor
- 2) Cyclone or pipeline connection adapter
- 3) Collecting hopper
- 4) Intake hopper
- 5) Cyclone dust separator
- 6) Suspension
- 7) Throttle valve
- 8) Inspection window

7.0 Technical Specifications

Motor B5	0,75 kW at 3000 U/min
Processing capacity	12 – 14 t/h
Air throughput capacity	1400 m ³ /h
Air pressure	120 mm/WS
Fan pipe	Ø 150 mm
Horizontal pipeline	max. 18 m
Weight	30 kg
Cyclone weight	14 kg (Optional)

The specified processing capacity was measured with a fully opened throttle valve and the original cyclone dust separator connected via a 4 m pipeline.

Figure 2: Pre-cleaner dimensions in mm



8.0 Installation

The pre-cleaner and the cyclone dust separator are safely mounted (suspended) using the suspension device (see Page 7, Figure 1, Pos. 6). The pipe section between the fan and the cyclone should not exceed 18 m of horizontal distance.

Install the pre-cleaner in a level position.

8.1 Electric Connections



The electric connections of our machines and equipment should only be carried out by a duly authorized electrician.

If the pre-cleaner is delivered with a complete electric switchboard, the latter will only have to be connected according to the provided electric wiring diagram.

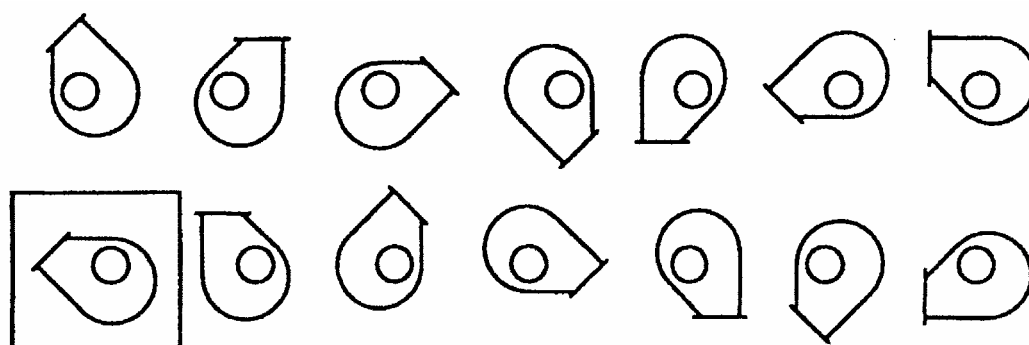
If the pre-cleaner is delivered without a complete switchboard, it should be equipped with a suitable motor safety.

The required rotation direction is indicated by an arrow on the fan housing.

8.2 Fan Installation

The centrifugal fan can be rotated in any direction against the pre-cleaner housing. The factory preset direction of the framed fan is shown in Figure 3.

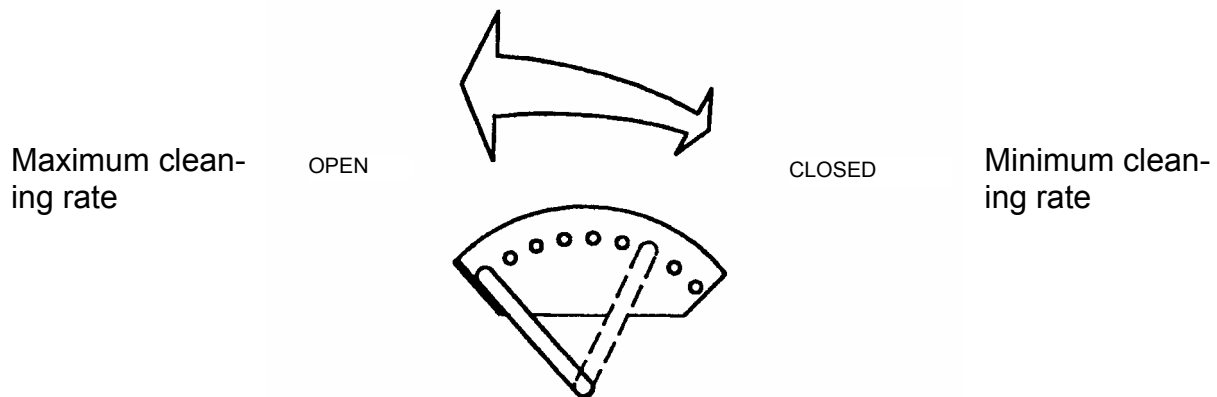
Figure 3: Fan installation options



8.3 Cleaning Rate Adjustment

The cleaning rate is adjusted by the throttle valve (see Page 7, Figure 1, Pos. 7).

Figure 4: Throttle valve



9.0 Startup

Check that all pipeline connections are tight and that no foreign objects remain inside the pre-cleaner and the cyclone prior to pre-cleaner startup.

The pre-cleaner operation is based on the pneumatic separation principle, so only the lighter particles are removed from the processed material.

If the removed dust, small grain, chaff, straw etc. needs to be captured, a sack or a BIG-BAG is fitted to the cyclone outlet.

The throttle gate valve on the fan should be completely open before the initial startup or at every product change.

After the pre-cleaner has been put in operation, material supply can be commenced. Check the cleaning rate at the cyclone outlet after the first quantity of product has gone through the pre-cleaner. In addition, the product quality at the pre-cleaner outlet should be assessed.

Should too much good grain be discharged with the waste, gradually close the throttle valve until only dust and other light particles are discharged from the cyclone.

Should the output product contain too much foreign material, reduce the product input until the desired cleaning rate is achieved.

10.0 Maintenance and Cleaning

Check the fan and distributor impellers regularly for wear and damage. If necessary, replace the damaged or worn parts. An exploded view of the pre-cleaner is shown on Page 12, Figure 5.



Disconnect the power supply before any maintenance operations!

10.1 Fan Impeller and Liner Replacement

- Unscrew the nuts (Pos. 4) on the motor flange (Pos. 3) and discharge pipe (Pos. 12) .
- Remove the motor flange and impeller from the fan housing.
- Now the impeller and liner can be replaced.
- Assemble the fan in a reversed order.

10.2 Distributor Impeller Replacement

- Unscrew the bolts (Pos. 23), around the collecting hopper (Pos. 22) and remove the distributor impeller (Pos. 20).
- Replace the distributor impeller.
- Assemble the cleaner in a reversed order.

10.3 Cleaning



Make sure that the pre-cleaner cannot be accidentally switched on during cleaning operations. Observe the safety guidelines in Section 4.

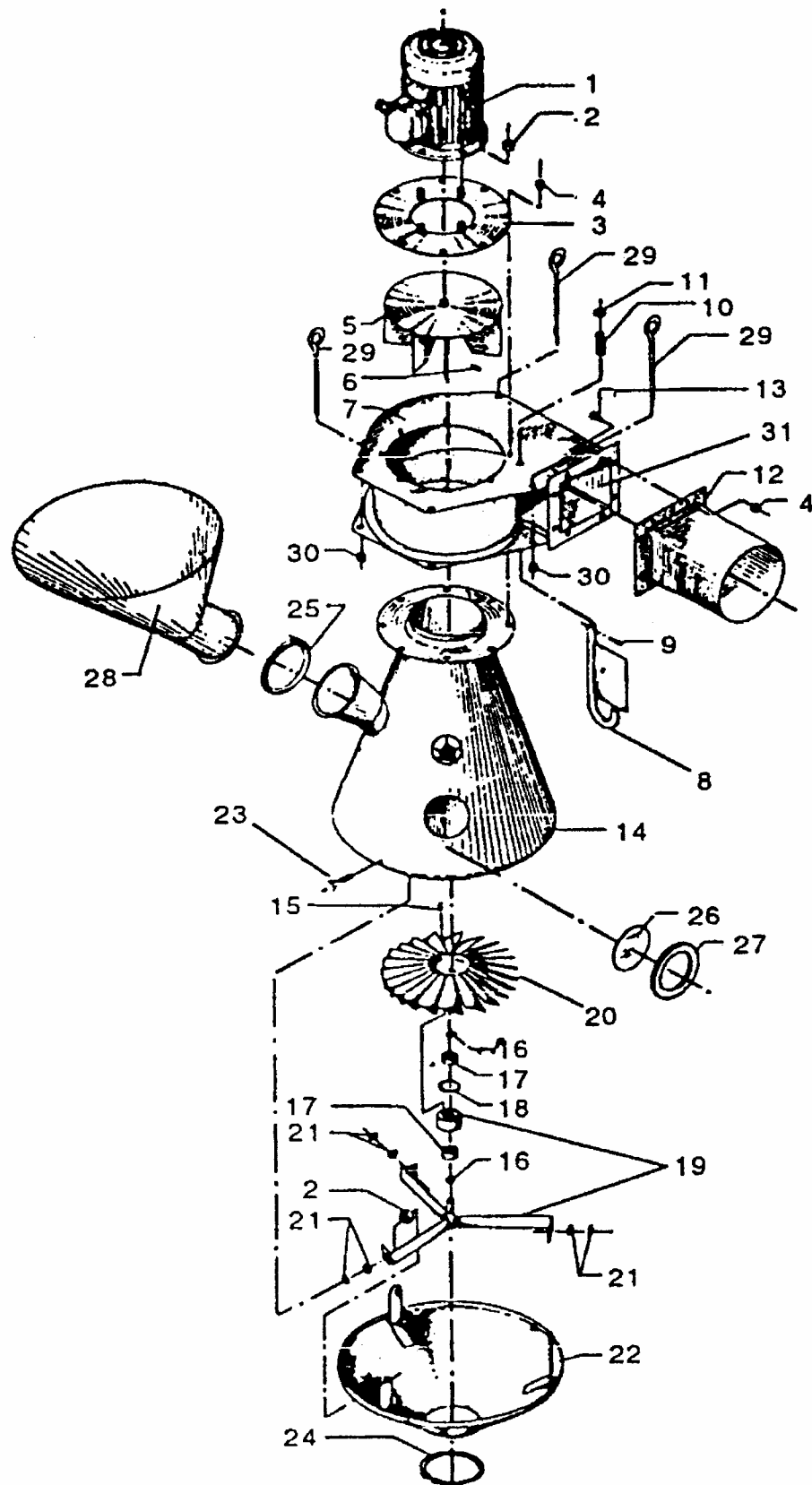
Check the fan motor regularly for dust deposits and clean if necessary to prevent motor overheating.

The pipeline between the pre-cleaner and the cyclone should be cleared of eventual fouling and dust deposits at least once every week.

If the cyclone dust separator is equipped with an additional exhaust filter, the filter hoses should be cleaned by beating every day and by washing once every year. The separated dust should be regularly removed from the filter hoses.

11.0 Spare Parts

Figure 5: Exploded view of the pre-cleaner



11.1 Spare Parts for Pre-cleaner WR 14

Pos.	Art.-No.	No.	Description	Dimensions	DIN	Dwg.-No.
1.	91456432	1	Motor 0,75 kW 3000 rpm			
2.	992108	7	M8 nut			
3.	55413022	1	Motor console			
4.	9492106	16	M6 nut			
5.	55347061	1	Fan impeller			
6.	900585	1	M6 x 8 bolt			
7.	55347014	1	Fan housing			
8.	55431064	1	Throttle slider			
9.	9497203	1	Insert pin			
10.	45417047	1	Throttle slider spring			
11.	9494106	8	A6 washer			
12.	63438085	1	Adapter FI-150mm long			
13.	9495111	8	M6 x 16 bolt			
14.	55425009	1	Housing			
15.	92990689	3	M5 x 12 bolt			
16.	92493108	2	Thrust ring 8 mm U			
17.	95464001	2	Bearing 6200 2RS			
18.	92493108	1	Thrust ring 30 mm I			
19.	55415034	1	Support with bearing housing			
20.		1	Distributor impeller			
	55452111		Without support			
	55345033		With support and bearing			
21.	9494008	3	A8 washer, spezial			
22.	50345018	1	Collecting hopper			
23.	9495160	3	M8 x 30 bolt			
24.	92417115	1	Clamp ring I-150			
25.	92417117	1	Clamp ring I-125			
26.	50455031	1	Inspection window			
27.	55455032	1	Window gasket			
28.	50434019	1	Intake hopper			
29.	55411011	3	Hook			
30.	9492108	3	M8 nut			
31.		1	Liner (ablative)			

With Your
partner



into the future

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